

# Ion Mobility Spectrometry

In Ion Mobility Spectrometry (IMS), the analyte is heated and gasified before going through the ionization region, in which gaseous molecules are ionized by a corona discharge ionization source into positive or negative, or sometimes both ions. The ions pass through an ion shutter that controls their passage into the drift tube. Under the effect of the electric field, ions migrate through the tube to the detector with different speeds which produce a current pulse detected using a Faraday plate and finally form an ion mobility spectrum.

The corona discharge ionization source is used for the detection of aromatic compounds and alkanes, which are not detectable by conventional IMS. The ionization efficiency of such a source is very high and it can be used for the production of both positive and negative ions.

## Features:

- Space saving design
- Corona discharge ionization source
- Analysis in negative and positive modes
- Negative detection without interferences of NO<sub>x</sub>
- User friendly windows-based software
- Accurate injection using a novel designed injection port
- Touch panel display for temperature and voltage control



## Application

### Environmental and life sciences

- Aliphatic, aromatic and oxygenated hydrocarbons, halocarbons.
- Monitoring of water, air and streams while industrial processes

### Electronics- semiconductors

- Detection of organic contaminants on silicon wafers

### Military

- Detection of chemical warfare agents (CWAs)
- Detection of Toxic industrial chemicals (TICs)

### Airport security

- Checking the explosive traces on luggage, clothing, etc.

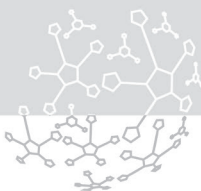
### Biology

- Detecting bacterial and viral pathogens

### Drugs

- Drug interdiction: morphine, codeines, and etc.
- Clinical drugs: antibiotics, anti-diabetic drugs, etc.

### Forensic examination



SPECIFICATION		
Models	Manual	Digital
	PC required	Internal PC
Parameter Control	Manual	Using touch panel
Power	220 V, 900 W	
Sampling	Solid, liquid and gas	
Detection limit	pg to ng	
Dynamic range	2-4 orders of magnitude	
Drift voltage polarity	Positive and negative, switchable	
Warm-up time	60 min	
Analysis time	3-5 sec	
Operating temperature	Up to 200 °C	
Dimensions (W×D×H)	50×60×60 cm	

